

## **Blast Disease Response of Blast Resistant Monogenic Lines in Korea**

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### **[Introduction]**

This study was conducted to investigate the incidence of blast disease and to monitor the occurrence patterns of each region by year using blast resistant monogenic lines in Korea.

### **[Materials and Methods]**

Blast nursery test was established in Jeju, Ongjin and Icheon for two years from 2016 to 2017, using thirty -three blast resistant monogenic lines and 15 reference varieties. The seeds sown in late June and the degree of leaf blast disease was investigated about one month after sowing. The incidence pattern and response of leaf blast disease were examined by region and year.

### **[Results and Discussions]**

The mean leaf blast incidence of the test lines in Icheon and Jeju was 5.6 and 3.5, respectively. Among the tested monogenic lines, the five lines, IRBL19-A, RBL20-IR24, IRBLta2-PI, IRBLTA-CP1 and IRBLz5-CA., were showed low leaf blast incidence.. And the lines with severe disease were IRBLa-A, CO 39, IRBLi-F5, IRBLsh-B and IRBL3-CP4. On the other hand, three lines such as IRBLzt-T, IRBLta-CT2, and LTH were showed big variation by region and year. However, IRBLi-F5, IRBLks-F5 IRBLz-Fu, and IRBLTA-CP1 lines were found to have little difference in regional and yearly incidence. The pathogenicity of the pathogens distributed in the test area can be estimated through the resistance reaction of the lines harboring the blast resistance gene, and it will be possible to establish a plan for blast disease control.

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